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<110> BERCHTOLD, Peter
ESCHER, Robert F.A.

<120> Anti-GPIIB/IIIA Recombinant Antibodies

<130> 100564-09049

<140> US 09/424,840
<141> 1999-12-03

<150> DE 19723904.8
<151> 1997-06-06

<150> DE 19755227.7
<151> 1997-12-12

<150> DE 19820663.1
<151> 1998-05-08

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<170> PatentIn Ver. 2.1

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<220>
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Gln Val Lys Leu Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
  1               5                  10                  15

acc ctg tcc ctc aac tgc act gtc tct ggt cgc tcc atc agt ggt tac   96
Thr Leu Ser Leu Asn Cys Thr Val Ser Gly Arg Ser Ile Ser Gly Tyr
             20                  25                  30

tct tgg aga tgg atc cgg cag tct cca ggg aag gga cta gag tgg att   144
Ser Trp Arg Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile
         35                  40                  45

ggg gat atc tct tat agt ggg agt acc aag tac aaa ccc tcc ctc agg   192
Gly Asp Ile Ser Tyr Ser Gly Ser Thr Lys Tyr Lys Pro Ser Leu Arg
     50                  55                  60
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agt cga gtc acc ctg tca gta gac acg tcc aag aac cag ttc tcc ctg   240
Ser Arg Val Thr Leu Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
 65                  70                  75                  80

aag ctg aat tcg gtg acc gct gcg gac acg gcc gtc tat tac tgt gcg   288
Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

cga gtc ttg ccc ttt gac ccg atc tcg atg gac gtc tgg ggc aaa ggg   336
Arg Val Leu Pro Phe Asp Pro Ile Ser Met Asp Val Trp Gly Lys Gly
            100                 105                 110

acc acg gtc acc gtc tcc tca                                      357
Thr Thr Val Thr Val Ser Ser
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<400> 2

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Gln Val Lys Leu Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
  1               5                  10                  15

Thr Leu Ser Leu Asn Cys Thr Val Ser Gly Arg Ser Ile Ser Gly Tyr
             20                  25                  30

Ser Trp Arg Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile
         35                  40                  45

Gly Asp Ile Ser Tyr Ser Gly Ser Thr Lys Tyr Lys Pro Ser Leu Arg
     50                  55                  60

Ser Arg Val Thr Leu Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
 65                  70                  75                  80

Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

Arg Val Leu Pro Phe Asp Pro Ile Ser Met Asp Val Trp Gly Lys Gly
            100                 105                 110

Thr Thr Val Thr Val Ser Ser
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<210> 3
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<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(333)

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Val Val Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Trp Val
  1               5                  10                  15

acc atc tct tgt tct ggg agc agc tcc aac atc aga agt aat cct gtt   96
Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Arg Ser Asn Pro Val
             20                  25                  30

agc tgg tat cac cag gtc cca ggc acg gcc ccc aaa ctc ctc atc ttt   144
Ser Trp Tyr His Gln Val Pro Gly Thr Ala Pro Lys Leu Leu Ile Phe
         35                  40                  45

ggt agt cat cag cgg ccc tca ggg gtc cct gac cga ttc tct ggc tcc   192
Gly Ser His Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
     50                  55                  60

aag tcg ggc acc tcc gcc tcc ctg gcc atc cgt ggg ctc caa tct ggg   240
Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Arg Gly Leu Gln Ser Gly
 65                  70                  75                  80

gat gct ggt gac tat tac tgt gca aca tgg gat gac ggc ctc aat ggt   288
Asp Ala Gly Asp Tyr Tyr Cys Ala Thr Trp Asp Asp Gly Leu Asn Gly
                 85                  90                  95

ccg gtg ttc ggc gga ggg acc aag ctg acc gtc cta agt cag ccc       333
Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Ser Gln Pro
            100                 105                 110
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<210> 4
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<212> PRT
<213> Homo sapiens

<400> 4
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Val Val Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Trp Val
  1               5                  10                  15

Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Arg Ser Asn Pro Val
             20                  25                  30

Ser Trp Tyr His Gln Val Pro Gly Thr Ala Pro Lys Leu Leu Ile Phe
         35                  40                  45
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```
Gly Ser His Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
     50                  55                  60

Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Arg Gly Leu Gln Ser Gly
 65                  70                  75                  80

Asp Ala Gly Asp Tyr Tyr Cys Ala Thr Trp Asp Asp Gly Leu Asn Gly
                 85                  90                  95

Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Ser Gln Pro
            100                 105                 110
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<210> 5
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<213> Homo sapiens

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<400> 5

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Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
  1               5                  10                  15

tcc ctg aga ctc tcc tgt gca gcc tct gga ttc acc ttc agt agc tat   96
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
             20                  25                  30

gct atg cac tgg gtc cgc cag gct cca ggc aag ggg ctg gag tgg gtg   144
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
         35                  40                  45

gca gtt ata tca tat gat gga agc aat aaa tac tac gca gac tcc gtg   192
Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
     50                  55                  60

aag ggc cga ttc gcc atc tcc aga gac aat tcc aag aac acg ctg tat   240
Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65                  70                  75                  80

ctg caa atg aac agc ctg aga gct gag gac acg gct gtg tat tac tgt   288
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                 85                  90                  95

gcg aga gcg ctg ggg agc tgg ggg ggt tgg gac cac tac atg gac gtc   336
Ala Arg Ala Leu Gly Ser Trp Gly Gly Trp Asp His Tyr Met Asp Val
            100                 105                 110
```

```
tgg ggc aaa ggg acc acg gtc acc gtc tcc tca                          369
Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120
```

<210> 6
<211> 123
<212> PRT
<213> Homo sapiens

<400> 6

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Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
  1               5                  10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
             20                  25                  30

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
         35                  40                  45

Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
     50                  55                  60

Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                 85                  90                  95

Ala Arg Ala Leu Gly Ser Trp Gly Gly Trp Asp His Tyr Met Asp Val
            100                 105                 110

Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120
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<210> 7
<211> 333
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(333)

<400> 7

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gtg gtg act cag cca ccc tca gcg tct ggg acc ccc ggg cag agg gtc   48
Val Val Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg Val
  1               5                  10                  15
```

```
acc atc tct tgt tct gga agc agc tcc aac atc gga agt aat act gta   96
Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Thr Val
             20                  25                  30

aac tgg tac cag cag ctc cca gga acg gcc ccc aaa ctc ctc atc tat   144
Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr
         35                  40                  45

agt aat aat cag cgg ccc tca ggg gtc cct gac cga ttc tct ggc tcc   192
Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
     50                  55                  60

aag tct ggc acc tca gcc tcc ctg gcc atc agt ggg ctc cag tct gag   240
Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln Ser Glu
 65                  70                  75                  80

gat gag gct gat tat tac tgt gca gca tgg gat gac agc ctg aat ggt   288
Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Asn Gly
                 85                  90                  95

tgg gtg ttc ggc gga ggg acc aag ctg acc gtc cta ggt cag ccc       333
Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
            100                 105                 110
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<210> 8
<211> 111
<212> PRT
<213> Homo sapiens

<400> 8

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Val Val Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg Val
  1               5                  10                  15

Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Thr Val
             20                  25                  30

Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr
         35                  40                  45

Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
     50                  55                  60

Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln Ser Glu
 65                  70                  75                  80

Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Asn Gly
                 85                  90                  95

Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
            100                 105                 110
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<210> 9
<211> 369
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(369)

<400> 9
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cag gtg aaa ctg ctc gag tct ggg gga ggc ttg gtt cac ccc ggg ggg   48
Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Leu Val His Pro Gly Gly
  1               5                  10                  15

tcc ctg aga ctc tct tgt gca gcc tct gga ttt acg ttt gac aac ttt   96
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asn Phe
             20                  25                  30

gcc atg agc tgg gtc cgc cag gct cca ggg aag ggg ctg gag tgg gtc   144
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
         35                  40                  45

tca ggc att agt ggt ggt ggt ctt ttg aca cac tac gca gac tcc gtg   192
Ser Gly Ile Ser Gly Gly Gly Leu Leu Thr His Tyr Ala Asp Ser Val
     50                  55                  60

aag ggc cgg ttc acc atc tcc aga aac aat tcc agg aac act gta tac   240
Lys Gly Arg Phe Thr Ile Ser Arg Asn Asn Ser Arg Asn Thr Val Tyr
 65                  70                  75                  80

cta caa atg aac agc ctg aga gcc gaa gac acg gcc gtg tat tat tgt   288
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                 85                  90                  95

gtg aga gat ctg ggc tat aga gta ctt tcg act ttt act ttt gat atc   336
Val Arg Asp Leu Gly Tyr Arg Val Leu Ser Thr Phe Thr Phe Asp Ile
            100                 105                 110

tgg ggc cag ggg aca aag gtc acc gtc tct tca                      369
Trp Gly Gln Gly Thr Lys Val Thr Val Ser Ser
        115                 120
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<210> 10
<211> 123
<212> PRT
<213> Homo sapiens

<400> 10

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Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Leu Val His Pro Gly Gly
  1               5                  10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asn Phe
             20                  25                  30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
         35                  40                  45

Ser Gly Ile Ser Gly Gly Gly Leu Leu Thr His Tyr Ala Asp Ser Val
     50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asn Asn Ser Arg Asn Thr Val Tyr
 65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                 85                  90                  95

Val Arg Asp Leu Gly Tyr Arg Val Leu Ser Thr Phe Thr Phe Asp Ile
            100                 105                 110

Trp Gly Gln Gly Thr Lys Val Thr Val Ser Ser
        115                 120
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<210> 11
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<212> DNA
<213> Homo sapiens

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<221> CDS
<222> (1)..(375)

<400> 11

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Val Val Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln Ser Ile
  1               5                  10                  15

acc atc tcc tgc act gga acc agc agt gct att ggg aat tat aac ttt   96
Thr Ile Ser Cys Thr Gly Thr Ser Ser Ala Ile Gly Asn Tyr Asn Phe
             20                  25                  30

gtc ccc tgg tac caa cag cac cca ggc aaa gcc ccc aaa ctc atg att   144
Val Pro Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu Met Ile
         35                  40                  45

tat gag ggc agt aag cgg ccc tca ggg gtt tct aat cgc ttc tct ggc   192
Tyr Glu Gly Ser Lys Arg Pro Ser Gly Val Ser Asn Arg Phe Ser Gly
     50                  55                  60
```

```
tcc aag tct ggc aac acg gcc tcc ctg aca atc tct ggg ctc cag gct   240
Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln Ala
 65                  70                  75                  80

gag gac gag gct gag tat tac tgc tgc tca tat gtt cat agt agc act   288
Glu Asp Glu Ala Glu Tyr Tyr Cys Cys Ser Tyr Val His Ser Ser Thr
                85                  90                  95

aat tgg gtg ttc ggc gga ggg acc aag ctg acc gtc cta ggt cag ccc   336
Asn Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
            100                 105                 110

aag gct gcc ccc tcg gtc act ctg ttc cca ccc tcc tct               375
Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser
        115                 120                 125
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<210> 12
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<212> PRT
<213> Homo sapiens

<400> 12

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Val Val Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln Ser Ile
  1               5                  10                  15

Thr Ile Ser Cys Thr Gly Thr Ser Ser Ala Ile Gly Asn Tyr Asn Phe
             20                  25                  30

Val Pro Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu Met Ile
         35                  40                  45

Tyr Glu Gly Ser Lys Arg Pro Ser Gly Val Ser Asn Arg Phe Ser Gly
     50                  55                  60

Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln Ala
 65                  70                  75                  80

Glu Asp Glu Ala Glu Tyr Tyr Cys Cys Ser Tyr Val His Ser Ser Thr
                85                  90                  95

Asn Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
            100                 105                 110

Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser
        115                 120                 125
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<210> 13
<211> 366

<212> DNA
<213> Homo sapiens

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<221> CDS
<222> (1)..(366)

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Gln Val Lys Leu Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
  1               5                  10                  15

acc ctg tct ctc acc tgc act gtc tct gat gtc tcc atc aga agt cat   96
Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Val Ser Ile Arg Ser His
             20                  25                  30

tac tgg agt tgg ctc cgg cag ccc cca ggg aag gga ctg gag tgg att   144
Tyr Trp Ser Trp Leu Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
         35                  40                  45

ggg ttt atc tat gac ggt gcg aga acc agg ttc aac ccc tcc ctc agg   192
Gly Phe Ile Tyr Asp Gly Ala Arg Thr Arg Phe Asn Pro Ser Leu Arg
     50                  55                  60

agt cga gtc tcc ctt tca atg gac cca tcc aag aag cag ttt tcc ctg   240
Ser Arg Val Ser Leu Ser Met Asp Pro Ser Lys Lys Gln Phe Ser Leu
 65                  70                  75                  80

aaa ctg ggg tct gtg acc gct gcg gac tcg gcc gtc tac tac tgt gcg   288
Lys Leu Gly Ser Val Thr Ala Ala Asp Ser Ala Val Tyr Tyr Cys Ala
                 85                  90                  95

aga gac gcg gat gga gat ggc ttc agc cca tac tac ttt ccc tac tgg   336
Arg Asp Ala Asp Gly Asp Gly Phe Ser Pro Tyr Tyr Phe Pro Tyr Trp
            100                 105                 110

ggc cag gga atc ccg gtc tcc gtc tcc tcg                          366
Gly Gln Gly Ile Pro Val Ser Val Ser Ser
        115                 120
```

<210> 14
<211> 122
<212> PRT
<213> Homo sapiens

<400> 14
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Gln Val Lys Leu Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
  1               5                  10                  15

Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Val Ser Ile Arg Ser His
```

```
            20                  25                  30

Tyr Trp Ser Trp Leu Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
         35                  40                  45

Gly Phe Ile Tyr Asp Gly Ala Arg Thr Arg Phe Asn Pro Ser Leu Arg
     50                  55                  60

Ser Arg Val Ser Leu Ser Met Asp Pro Ser Lys Lys Gln Phe Ser Leu
 65                  70                  75                  80

Lys Leu Gly Ser Val Thr Ala Ala Asp Ser Ala Val Tyr Tyr Cys Ala
                 85                  90                  95

Arg Asp Ala Asp Gly Asp Gly Phe Ser Pro Tyr Tyr Phe Pro Tyr Trp
            100                 105                 110

Gly Gln Gly Ile Pro Val Ser Val Ser Ser
        115                 120
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<210> 15
<211> 372
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(372)

<400> 15

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cag gtg aaa ctg ctc gag tct ggg gga ggc gtg gtc cac cct ggg agg   48
Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Val Val His Pro Gly Arg
  1               5                  10                  15

tcc ctg aga ctc tcc tgt gca gcc tct gga ttc acc ttc agt agc tat   96
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
             20                  25                  30

act atg cac tgg gtc cgc cag gct cca ggc aag ggg ctg gag tgg gtg   144
Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
         35                  40                  45

gca ctt ata tca tat gat gga agc aat aaa tac tac gca gac tcc gtg   192
Ala Leu Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
     50                  55                  60

aag ggc cga ttc gcc atc tcc aga gac aat tcc aag aac acg cta tat   240
Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65                  70                  75                  80
```

```
ctg caa atg aac agc ctg aga gct gag gac acg gct gtg tat tac tgt   288
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

gcg aaa gat ggc cgg agt ggg agc tac gcc agg ttc gac ggt atg gac   336
Ala Lys Asp Gly Arg Ser Gly Ser Tyr Ala Arg Phe Asp Gly Met Asp
            100                 105                 110

gtc tgg ggc caa ggg acc acg gtc acc gtc tcc tca                   372
Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120
```

<210> 16
<211> 124
<212> PRT
<213> Homo sapiens

<400> 16

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Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Val Val His Pro Gly Arg
  1               5                  10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
             20                  25                  30

Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
         35                  40                  45

Ala Leu Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
     50                  55                  60

Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Lys Asp Gly Arg Ser Gly Ser Tyr Ala Arg Phe Asp Gly Met Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120
```

<210> 17
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<212> DNA
<213> Homo sapiens

<220>

<221> CDS
<222> (1)..(372)

<400> 17
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cag gtg aaa ctg ctc gag tct ggg gga ggc ttg gta cag cct ggc agg   48
Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
  1               5                  10                  15

tcc ctg aga ctc tcc tgt gca gcc tct gga ttc acc ttt gat gat tat   96
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
             20                  25                  30

gcc ctg cac tgg gtc cgt caa gct cca ggg aag ggc ctg gag tgg gtc   144
Ala Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
         35                  40                  45

tca ggt att agt tgg gat agt ggt acc ata ggc tat gcg gac tct gtg   192
Ser Gly Ile Ser Trp Asp Ser Gly Thr Ile Gly Tyr Ala Asp Ser Val
     50                  55                  60

aag ggc cga ttc acc atc tcc aga gac aac gcc aag aac tcc ctg tat   240
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65                  70                  75                  80

ctg caa atg aac agt ctg aga gct gag gac acg gcc ttg tat tac tgt   288
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
                 85                  90                  95

gta aaa gat atg ggg tct tcg gta gtg gct acg tac aat gct ttt gat   336
Val Lys Asp Met Gly Ser Ser Val Val Ala Thr Tyr Asn Ala Phe Asp
            100                 105                 110

atc tgg ggc caa ggg aca atg gtc acc gtc tct tca                  372
Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120
```

<210> 18
<211> 124
<212> PRT
<213> Homo sapiens

<400> 18
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Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
  1               5                  10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
             20                  25                  30

Ala Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
         35                  40                  45
```

```
Ser Gly Ile Ser Trp Asp Ser Gly Thr Ile Gly Tyr Ala Asp Ser Val
     50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
                 85                  90                  95

Val Lys Asp Met Gly Ser Ser Val Val Ala Thr Tyr Asn Ala Phe Asp
            100                 105                 110

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120
```

<210> 19
<211> 360
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(360)

<400> 19

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cag gtg aaa ctg ctc gag tca ggc cca gga ctg gtg aag cct tcg gag   48
Gln Val Lys Leu Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
  1               5                  10                  15

acc ctg tcc ctc acc tgc act gtc tct ggt ggc tcc ttc agt act tac   96
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Phe Ser Thr Tyr
             20                  25                  30

tat tgg agc tgg atc cgg cag ccc cca ggg aag gga ctg gag tgg att   144
Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
         35                  40                  45

ggg tat atc tat tac agt ggg aac acc aac tac aac ccc tcc ctc aag   192
Gly Tyr Ile Tyr Tyr Ser Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys
     50                  55                  60

agt cga gcc acc ata tca gta gac acg tcc aag aac cag ttc tcc ctg   240
Ser Arg Ala Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
 65                  70                  75                  80

aag ctg agc tct gtt acc gcc gca gac acg gcc gta tat tac tgt gcg   288
Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                 85                  90                  95
```

```
aga ctg cgt aac gat ggc tgg aat gat ggc ttt gat atc tgg ggc caa   336
Arg Leu Arg Asn Asp Gly Trp Asn Asp Gly Phe Asp Ile Trp Gly Gln
            100                 105                 110

ggg aca atg gtc acc gtc tct tca                                  360
Gly Thr Met Val Thr Val Ser Ser
        115                 120
```

<210> 20
<211> 120
<212> PRT
<213> Homo sapiens

<400> 20

```
Gln Val Lys Leu Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
  1               5                  10                  15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Phe Ser Thr Tyr
             20                  25                  30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
         35                  40                  45

Gly Tyr Ile Tyr Tyr Ser Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys
     50                  55                  60

Ser Arg Ala Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
 65                  70                  75                  80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                 85                  90                  95

Arg Leu Arg Asn Asp Gly Trp Asn Asp Gly Phe Asp Ile Trp Gly Gln
            100                 105                 110

Gly Thr Met Val Thr Val Ser Ser
        115                 120
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<210> 21
<211> 369
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(369)

<400> 21

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cag gtg aaa ctg ctc gag tct ggg gga ggc gtg gtc cag cct ggg agg   48
Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
  1               5                  10                  15

tcc ctg aga ctc tcc tgt gca gcc tct gga ttc acc ttc agt gac tat   96
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
             20                  25                  30

ggc atg cac tgg gtc cgc cag gct cca ggc aag ggg ctg gag tgg gtg   144
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
         35                  40                  45

gca gct ata tca tat gat gga agt aac aaa tac tat gca gac tcc gtg   192
Ala Ala Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
     50                  55                  60

aag ggc cga ttc tcc atc tcc aga gac aat tcc aac aat acg cta tat   240
Lys Gly Arg Phe Ser Ile Ser Arg Asp Asn Ser Asn Asn Thr Leu Tyr
 65                  70                  75                  80

ctg caa atg agc acc ctg aga gct gag gac acg gct gtc tat ttc tgt   288
Leu Gln Met Ser Thr Leu Arg Ala Glu Asp Thr Ala Val Tyr Phe Cys
                 85                  90                  95

gcg aga gat tcg gaa acg gca ata gcg gca gct gga cgg ttt gat atc   336
Ala Arg Asp Ser Glu Thr Ala Ile Ala Ala Ala Gly Arg Phe Asp Ile
            100                 105                 110

tgg ggc caa ggg aca atg gtc acc gtc tct tca                      369
Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120
```

<210> 22
<211> 123
<212> PRT
<213> Homo sapiens

<400> 22

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Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
  1               5                  10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
             20                  25                  30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
         35                  40                  45

Ala Ala Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
     50                  55                  60
```

```
Lys Gly Arg Phe Ser Ile Ser Arg Asp Asn Ser Asn Asn Thr Leu Tyr
 65                  70                  75                  80

Leu Gln Met Ser Thr Leu Arg Ala Glu Asp Thr Ala Val Tyr Phe Cys
                85                  90                  95

Ala Arg Asp Ser Glu Thr Ala Ile Ala Ala Ala Gly Arg Phe Asp Ile
            100                 105                 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120
```

<210> 23
<211> 366
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(366)

<400> 23

```
cag gtg aaa ctg ctc gag tct ggg gct gag gtg aag aag cct ggg tcc   48
Gln Val Lys Leu Leu Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
  1               5                  10                  15

tcg gtg atg gtc tcc tgc aag gct tct gga ggc acc ttc agc agc cat   96
Ser Val Met Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser His
             20                  25                  30

act atc agc tgg gtg cgg cag gcc cct gga caa ggc ctt gag tgg atg   144
Thr Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
         35                  40                  45

gga ggg atc acc cct atc ttt ggt aca gtg aac tac gca cag aag ttc   192
Gly Gly Ile Thr Pro Ile Phe Gly Thr Val Asn Tyr Ala Gln Lys Phe
     50                  55                  60

cag ggc aga gtc acc att acc gcg gac gaa ccc acg agc aca gcc tac   240
Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Pro Thr Ser Thr Ala Tyr
 65                  70                  75                  80

atg gaa ctg agg agc ctg aca tct gac gac tcg ggc atc tat tac tgt   288
Met Glu Leu Arg Ser Leu Thr Ser Asp Asp Ser Gly Ile Tyr Tyr Cys
                85                  90                  95

gcg aga gaa gat ggc act aca gta cca agt caa ccc ctt gag ttc tgg   336
Ala Arg Glu Asp Gly Thr Thr Val Pro Ser Gln Pro Leu Glu Phe Trp
            100                 105                 110
```

```
ggc cag gga acc cgg gtc acc gtc tcc tct                                366
Gly Gln Gly Thr Arg Val Thr Val Ser Ser
        115                 120


<210> 24
<211> 122
<212> PRT
<213> Homo sapiens

<400> 24
Gln Val Lys Leu Leu Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
  1               5                  10                  15

Ser Val Met Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser His
             20                  25                  30

Thr Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
         35                  40                  45

Gly Gly Ile Thr Pro Ile Phe Gly Thr Val Asn Tyr Ala Gln Lys Phe
     50                  55                  60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Pro Thr Ser Thr Ala Tyr
 65                  70                  75                  80

Met Glu Leu Arg Ser Leu Thr Ser Asp Asp Ser Gly Ile Tyr Tyr Cys
                 85                  90                  95

Ala Arg Glu Asp Gly Thr Thr Val Pro Ser Gln Pro Leu Glu Phe Trp
            100                 105                 110

Gly Gln Gly Thr Arg Val Thr Val Ser Ser
        115                 120



<210> 25
<211> 363
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(363)

<400> 25
cag gtg aaa ctg ctc gag tct ggg gga ggc ttg gtc cag cct ggg ggg   48
Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
  1               5                  10                  15
```

```
tcc ctg aga ctc tcc tgt tca gcc tct gga ttc acc ttc aat aaa tat   96
Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Asn Lys Tyr
             20                  25                  30

gca ata cac tgg gtc cgc cag gct cca ggg aag gga ctg gaa tat gtt   144
Ala Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Val
         35                  40                  45

tca gct att agt agt aat ggg ggt aac aca tac tac gca gac tcc gtg   192
Ser Ala Ile Ser Ser Asn Gly Gly Asn Thr Tyr Tyr Ala Asp Ser Val
     50                  55                  60

aag ggc aga ttc acc atc tcc aga gac aat tcc aag aac acg gtg tat   240
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr
 65                  70                  75                  80

ctt caa atg agc agt ctg aga gct gag gac acg gct gtg tat tac tgt   288
Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                 85                  90                  95

gtt aga gga agt ggg agc tac tta gga tac tac ttt gac tac tgg ggc   336
Val Arg Gly Ser Gly Ser Tyr Leu Gly Tyr Tyr Phe Asp Tyr Trp Gly
            100                 105                 110

cag gga acc ctg gtc acc gtc tcc tca                              363
Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
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<210> 26
<211> 121
<212> PRT
<213> Homo sapiens

<400> 26

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Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
  1               5                  10                  15

Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Asn Lys Tyr
             20                  25                  30

Ala Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Val
         35                  40                  45

Ser Ala Ile Ser Ser Asn Gly Gly Asn Thr Tyr Tyr Ala Asp Ser Val
     50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr
 65                  70                  75                  80

Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
```

```
                85                  90                  95

Val Arg Gly Ser Gly Ser Tyr Leu Gly Tyr Tyr Phe Asp Tyr Trp Gly
            100                 105                 110

Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
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<210> 27
<211> 366
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(366)

<400> 27

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gtg gtg act cag cca ccc tcg gtg tca gtg gct cca aga cag acg gcc   48
Val Val Thr Gln Pro Pro Ser Val Ser Val Ala Pro Arg Gln Thr Ala
  1               5                  10                  15

acg att acc tgt ggg gga tac aag att gga agt aaa agt gtc cac tgg   96
Thr Ile Thr Cys Gly Gly Tyr Lys Ile Gly Ser Lys Ser Val His Trp
             20                  25                  30

tac caa cag aag cca ggc cag gcc cct gta ttg gtc gtc tat gag gat   144
Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr Glu Asp
         35                  40                  45

tcc tac cgg ccc tca gag atc cct gag cga ttc tct ggc tcc aac tct   192
Ser Tyr Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
     50                  55                  60

ggg aac atg gcc acc ctg acc atc acc ggg gtc gaa gcc ggg gat gag   240
Gly Asn Met Ala Thr Leu Thr Ile Thr Gly Val Glu Ala Gly Asp Glu
 65                  70                  75                  80

gcc gac tac tac tgt cag gtg tgg gat aat act aat gat cag acg ata   288
Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Thr Asn Asp Gln Thr Ile
                 85                  90                  95

ttc ggc gga ggg acc aag ctg acc gtc cta cgt cag ccc aag gct gcc   336
Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Arg Gln Pro Lys Ala Ala
            100                 105                 110

ccc tcg gtc act ctg ttc ccg ccc tcc tct                          366
Pro Ser Val Thr Leu Phe Pro Pro Ser Ser
        115                 120
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<210> 28
<211> 122
<212> PRT
<213> Homo sapiens

<400> 28
Val Val Thr Gln Pro Pro Ser Val Ser Val Ala Pro Arg Gln Thr Ala
1 5 10 15

Thr Ile Thr Cys Gly Gly Tyr Lys Ile Gly Ser Lys Ser Val His Trp
20 25 30

Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr Glu Asp
35 40 45

Ser Tyr Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
50 55 60

Gly Asn Met Ala Thr Leu Thr Ile Thr Gly Val Glu Ala Gly Asp Glu
65 70 75 80

Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Thr Asn Asp Gln Thr Ile
85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Arg Gln Pro Lys Ala Ala
100 105 110

Pro Ser Val Thr Leu Phe Pro Pro Ser Ser
115 120

<210> 29
<211> 366
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(366)

<400> 29
cag gtg aaa ctg ctc gag tct ggg gct gag gtg aag aag cct ggg gcc 48
Gln Val Lys Leu Leu Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

tca gtg aag gtc tcc tgc aag gtt tcc gga tac acc ctc act gaa tta 96
Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Leu Thr Glu Leu
20 25 30

```
tcc atg cac tgg gtg cga cag gct cct gga aaa ggg ctt gag tgg atg   144
Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
         35                  40                  45

gga ggt ttt gat cct gaa gat ggt gaa aca atc tac gca cag aaa ttc   192
Gly Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe
     50                  55                  60

cag ggc aga gtc acc atg acc gag gac aca tct aca gac acg gcc tac   240
Gln Gly Arg Val Thr Met Thr Glu Asp Thr Ser Thr Asp Thr Ala Tyr
 65                  70                  75                  80

atg gag ctg agc agc ctg aga tct gag gac acg gcc gtg tat tac tgt   288
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                 85                  90                  95

gag aca ggt ctg agg tcg tac aac tat ggt cgt aac ctt gac tat tgg   336
Glu Thr Gly Leu Arg Ser Tyr Asn Tyr Gly Arg Asn Leu Asp Tyr Trp
            100                 105                 110

ggc cag gga acc ctg gtc acc gtc tcc tca                          366
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
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<210> 30
<211> 122
<212> PRT
<213> Homo sapiens

<400> 30

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Gln Val Lys Leu Leu Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
  1               5                  10                  15

Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Leu Thr Glu Leu
             20                  25                  30

Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
         35                  40                  45

Gly Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe
     50                  55                  60

Gln Gly Arg Val Thr Met Thr Glu Asp Thr Ser Thr Asp Thr Ala Tyr
 65                  70                  75                  80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                 85                  90                  95

Glu Thr Gly Leu Arg Ser Tyr Asn Tyr Gly Arg Asn Leu Asp Tyr Trp
            100                 105                 110
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Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 31
<211> 11
<212> PRT
<213> Homo sapiens

<400> 31
Val Leu Pro Phe Asp Pro Ile Ser Met Asp Val
1 5 10

<210> 32
<211> 14
<212> PRT
<213> Homo sapiens

<400> 32
Ala Leu Gly Ser Trp Gly Gly Trp Asp His Tyr Met Asp Val
1 5 10

<210> 33
<211> 5
<212> PRT
<213> Homo sapiens

<400> 33
Gly Tyr Ser Trp Arg
1 5

<210> 34
<211> 5
<212> PRT
<213> Homo sapiens

<400> 34
Ser Tyr Ala Met His
1 5

<210> 35
<211> 16
<212> PRT
<213> Homo sapiens

<400> 35
Asp Ile Ser Tyr Ser Gly Ser Thr Lys Tyr Lys Pro Ser Leu Arg Ser

1 5 10 15

<210> 36
<211> 17
<212> PRT
<213> Homo sapiens

<400> 36
Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

<210> 37
<211> 11
<212> PRT
<213> Homo sapiens

<400> 37
Ala Thr Trp Asp Asp Gly Leu Asn Gly Pro Val
1 5 10

<210> 38
<211> 11
<212> PRT
<213> Homo sapiens

<400> 38
Ala Ala Trp Asp Asp Ser Leu Asn Gly Trp Val
1 5 10

<210> 39
<211> 13
<212> PRT
<213> Homo sapiens

<400> 39
Ser Gly Ser Ser Ser Asn Ile Arg Ser Asn Pro Val Ser
1 5 10

<210> 40
<211> 13
<212> PRT
<213> Homo sapiens

<400> 40
Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Thr Val Asn
1 5 10

<210> 41
<211> 7
<212> PRT
<213> Homo sapiens

<400> 41
Gly Ser His Gln Arg Pro Ser
1 5

<210> 42
<211> 7
<212> PRT
<213> Homo sapiens

<400> 42
Ser Asn Asn Gln Arg Pro Ser
1 5

<210> 43
<211> 16
<212> PRT
<213> Homo sapiens

<400> 43
Val Arg Asp Leu Gly Tyr Arg Val Leu Ser Thr Phe Thr Phe Asp Ile
1 5 10 15

<210> 44
<211> 15
<212> PRT
<213> Homo sapiens

<400> 44
Asp Gly Arg Ser Gly Ser Tyr Ala Arg Phe Asp Gly Met Asp Val
1 5 10 15

<210> 45
<211> 14
<212> PRT
<213> Homo sapiens

<400> 45
Met Gly Ser Ser Val Val Ala Thr Tyr Asn Ala Phe Asp Ile
1 5 10

<210> 46
<211> 14
<212> PRT
<213> Homo sapiens

<400> 46
Asp Ala Asp Gly Asp Gly Phe Ser Pro Tyr Tyr Phe Pro Tyr
1 5 10

<210> 47
<211> 12
<212> PRT
<213> Homo sapiens

<400> 47
Leu Arg Asn Asp Gly Trp Asn Asp Gly Phe Asp Ile
1 5 10

<210> 48
<211> 14
<212> PRT
<213> Homo sapiens

<400> 48
Asp Ser Glu Thr Ala Ile Ala Ala Ala Gly Arg Phe Asp Ile
1 5 10

<210> 49
<211> 13
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<400> 49
Glu Asp Gly Thr Thr Val Pro Ser Gln Pro Leu Glu Phe
1 5 10

<210> 50
<211> 12
<212> PRT
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<400> 50
Gly Ser Gly Ser Tyr Leu Gly Tyr Tyr Phe Asp Tyr
1 5 10

<210> 51

<211> 13
<212> PRT
<213> Homo sapiens

<400> 51
Gly Leu Arg Ser Tyr Asn Tyr Gly Arg Asn Leu Asp Tyr
1 5 10

<210> 52
<211> 9
<212> PRT
<213> Homo sapiens

<400> 52
Cys Ser Tyr Val His Ser Ser Thr Asn
1 5

<210> 53
<211> 9
<212> PRT
<213> Homo sapiens

<400> 53
Gln Val Trp Asp Asn Thr Asn Asp Gln
1 5

<210> 54
<211> 5
<212> PRT
<213> Homo sapiens

<400> 54
Asn Phe Ala Met Ser
1 5

<210> 55
<211> 5
<212> PRT
<213> Homo sapiens

<400> 55
Ser Tyr Thr Met His
1 5

<210> 56
<211> 5

<212> PRT
<213> Homo sapiens

<400> 56
Asp Tyr Ala Leu His
1 5

<210> 57
<211> 5
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<213> Homo sapiens

<400> 57
Ser His Tyr Trp Ser
1 5

<210> 58
<211> 5
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<400> 58
Thr Tyr Tyr Trp Ser
1 5

<210> 59
<211> 5
<212> PRT
<213> Homo sapiens

<400> 59
Asp Tyr Gly Met His
1 5

<210> 60
<211> 5
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<400> 60
Ser His Thr Ile Ser
1 5

<210> 61
<211> 5
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<213> Homo sapiens

<400> 61
Lys Tyr Ala Ile His
1 5

<210> 62
<211> 5
<212> PRT
<213> Homo sapiens

<400> 62
Glu Leu Ser Met His
1 5

<210> 63
<211> 17
<212> PRT
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<400> 63
Gly Ile Ser Gly Gly Gly Leu Leu Thr His Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

<210> 64
<211> 17
<212> PRT
<213> Homo sapiens

<400> 64
Gly Ile Ser Gly Gly Gly Leu Leu Thr His Tyr Ala Asn Ser Val Lys Gly
1 5 10 15

<210> 65
<211> 17
<212> PRT
<213> Homo sapiens

<400> 65
Gly Ile Thr Pro Ile Phe Gly Thr Val Asn Tyr Ala Gln Lys Phe Gln Gly
1 5 10 15

<210> 66
<211> 14
<212> PRT
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<400> 66
Thr Gly Thr Ser Ser Ala Ile Gly Asn Tyr Asn Phe Val Pro
1 5 10

<210> 67
<211> 11
<212> PRT
<213> Homo sapiens

<400> 67
Gly Gly Tyr Lys Ile Gly Ser Lys Ser Val His
1 5 10

<210> 68
<211> 7
<212> PRT
<213> Homo sapiens

<400> 68
Glu Gly Ser Lys Arg Pro Ser
1 5

<210> 69
<211> 7
<212> PRT
<213> Homo sapiens

<400> 69
Glu Asp Ser Tyr Arg Pro Ser
1 5

<210> 70
<211> 17
<212> PRT
<213> Homo sapiens

<400> 70
Gly Ile Ser Trp Asp Ser Thr Ser Ile Gly Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

<210> 71
<211> 16
<212> PRT
<213> Homo sapiens

<400> 71

Phe Ile Tyr Asp Gly Ala Arg Thr Arg Phe Asn Pro Ser Leu Arg Ser
1 5 10 15

<210> 72
<211> 17
<212> PRT
<213> Homo sapiens

<400> 72
Ala Ile Ser Ser Asn Gly Gly Asn Thr Tyr Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

<210> 73
<211> 17
<212> PRT
<213> Homo sapiens

<400> 73
Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe Gln Gly
1 5 10 15

<210> 74
<211> 17
<212> PRT
<213> Homo sapiens

<400> 74
Gly Ile Ser Gly Gly Gly Leu Leu Thr His Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

<210> 75
<211> 30
<212> PRT
<213> Homo sapiens

<400> 75
Arg Phe Thr Ile Ser Arg Asn Asn Ser Arg Asn Thr Val Tyr Leu Gln Met Asn Ser
1 5 10 15

Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
20 25 30

<210> 76
<211> 17
<212> PRT
<213> Homo sapiens

<400> 76
Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asn Ser Val Lys Gly
1 5 10 15

<210> 77
<211> 17
<212> PRT
<213> Homo sapiens

<400> 77
Leu Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

<210> 78
<211> 17
<212> PRT
<213> Homo sapiens

<400> 78
Gly Ile Ser Trp Asp Ser Thr Ser Ile Gly Tyr Ala Asp Ser Val
1 5 10 15

Lys Gly

<210> 79
<211> 16
<212> PRT
<213> Homo sapiens

<400> 79
Phe Ile Tyr Asp Gly Ala Arg Thr Arg Phe Asn Pro Ser Leu Arg
1 5 10 15

Ser

<210> 80
<211> 14
<212> PRT
<213> Homo sapiens

<400> 80
Thr Gly Thr Ser Ser Ala Ile Gly Asn Tyr Asn Phe Val Pro
1 5 10

<210> 81
<211> 7
<212> PRT
<213> Homo sapiens

<400> 81
Glu Gly Ser Lys Arg Pro Ser
1 5

<210> 82
<211> 9
<212> PRT
<213> Homo sapiens

<400> 82
Cys Ser Tyr Val His Ser Ser Thr Asn
1 5

<210> 83
<211> 5
<212> PRT
<213> Homo sapiens

<400> 83
Asp Tyr Gly Met His
1 5

<210> 84
<211> 17
<212> PRT
<213> Homo sapiens

<400> 84
Ala Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

<210> 85
<211> 14
<212> PRT
<213> Homo sapiens

<400> 85
Asp Ser Glu Thr Ala Ile Ala Ala Ala Gly Arg Phe Asp Ile
1 5 10

<210> 86

<211> 5
<212> PRT
<213> Homo sapiens

<400> 86
Ser His Thr Ile Ser
1 5

<210> 87
<211> 17
<212> PRT
<213> Homo sapiens

<400> 87
Gly Ile Thr Pro Ile Phe Gly Thr Val Asn Tyr Ala Gln Lys Phe Gln Gly
1 5 10 15

<210> 88
<211> 17
<212> PRT
<213> Homo sapiens

<400> 88
Ala Ile Ser Ser Asn Gly Gly Asn Thr Tyr Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

<210> 89
<211> 12
<212> PRT
<213> Homo sapiens

<400> 89
Gly Ser Gly Ser Tyr Leu Gly Tyr Tyr Phe Asp Tyr
1 5 10

<210> 90
<211> 13
<212> PRT
<213> Homo sapiens

<400> 90
Gly Leu Arg Ser Tyr Asn Tyr Gly Arg Asn Leu Asp Tyr
1 5 10

<210> 91
<211> 5
<212> PRT

<213> Homo sapiens

<400> 91
Ser Tyr Ala Met His
1 5

<210> 92
<211> 5
<212> PRT
<213> Homo sapiens

<400> 92
Ser Tyr Ala Ile Ser
1 5

<210> 93
<211> 5
<212> PRT
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<400> 93
Ser Tyr Gly Met His
1 5

<210> 94
<211> 5
<212> PRT
<213> Homo sapiens

<400> 94
Glu Leu Ser Met His
1 5

<210> 95
<211> 17
<212> PRT
<213> Homo sapiens

<400> 95
Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

<210> 96
<211> 17
<212> PRT
<213> Homo sapiens

<400> 96
Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe Gln Gly
1 5 10 15

<210> 97
<211> 17
<212> PRT
<213> Homo sapiens

<400> 97
Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

<210> 98
<211> 17
<212> PRT
<213> Homo sapiens

<400> 98
Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe Gln Gly
1 5 10 15

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Ala Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Ser Trp Asp Ser Thr Ser Ile Gly Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
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Val Lys Asp Met Gly Ser Ser Val Val Ala Thr Tyr Asn Ala Phe Asp
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Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
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